

Alice

Learning to program: Part Three
Camera Control, Invisibility, and 3-D Text
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Under the direction of Professor Rodger
Duke University, 2008



www.cs.duke.edu/csed/alice/aliceInSchools

Camera Control

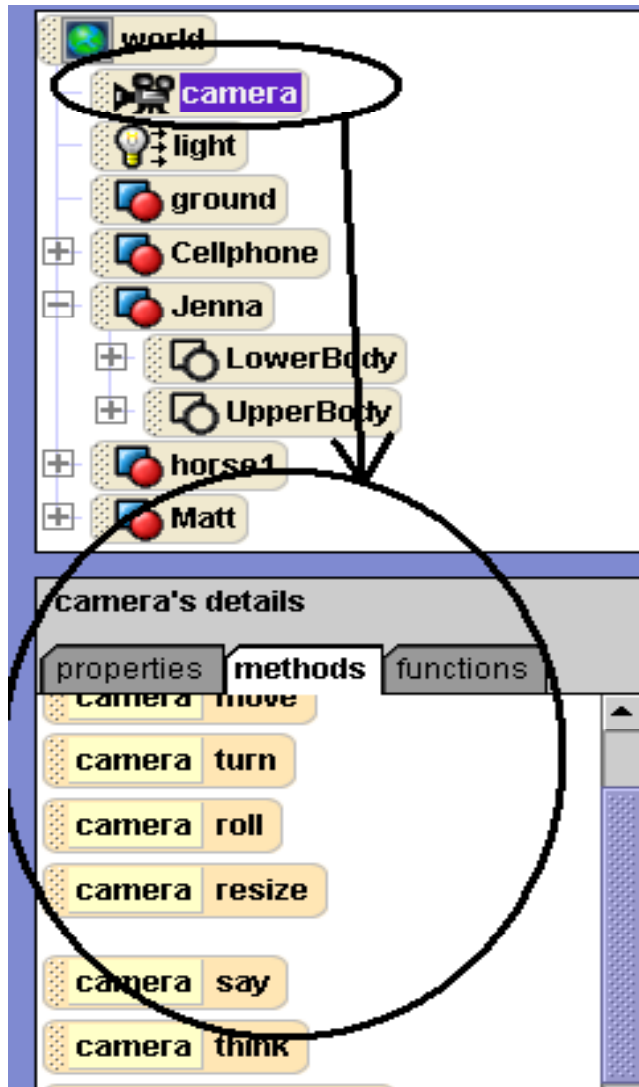
- Now that we have a great story written for our characters it would be nice to be able to change camera views.
- This can simplify the story and sometimes add dramatic effect

Camera Control

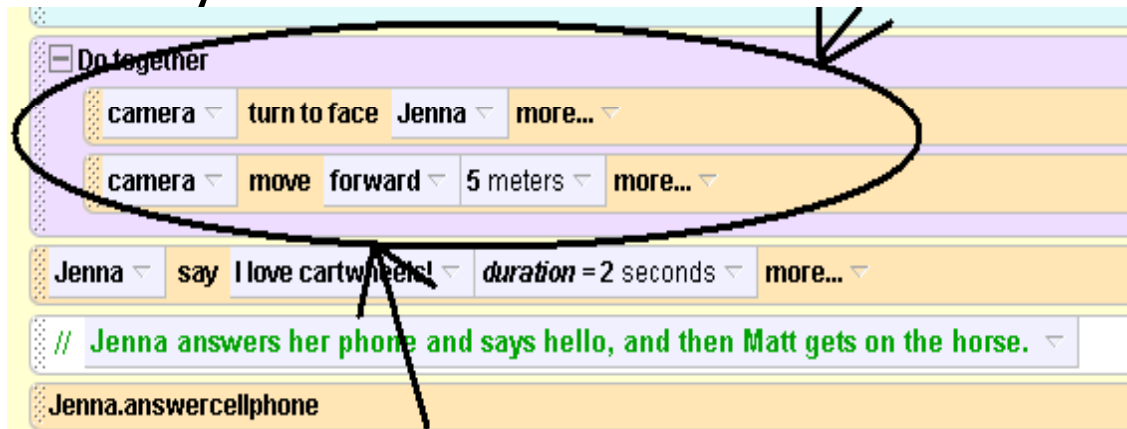


- Lets make the Camera Zoom in on our first character when she talks and then look at the horse while our second character gets on.

Camera Control



- Click on “camera” in your object tree.
- It should have a regular set of methods
- Insert code into your first method to have the camera face your character while they talk



Camera Control

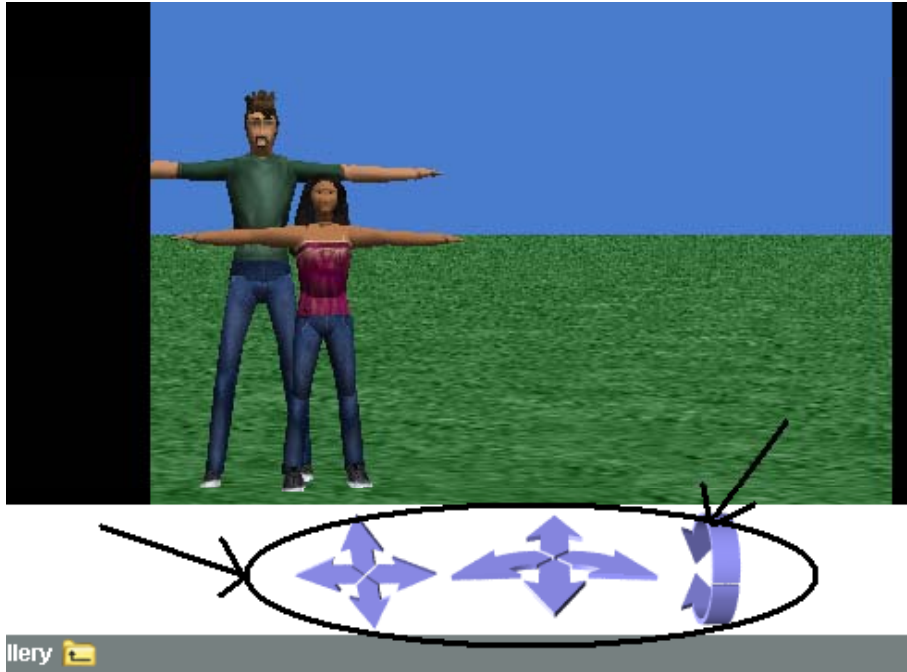


- When your second character gets on the horse, you can have the camera face him. Insert this code above **Matt.RideHorse**.



- Finally, have the camera face the horse and press the “N” key to have your horse say “neigh”, when the camera is facing the horse. Play your world to test it and press the N key.

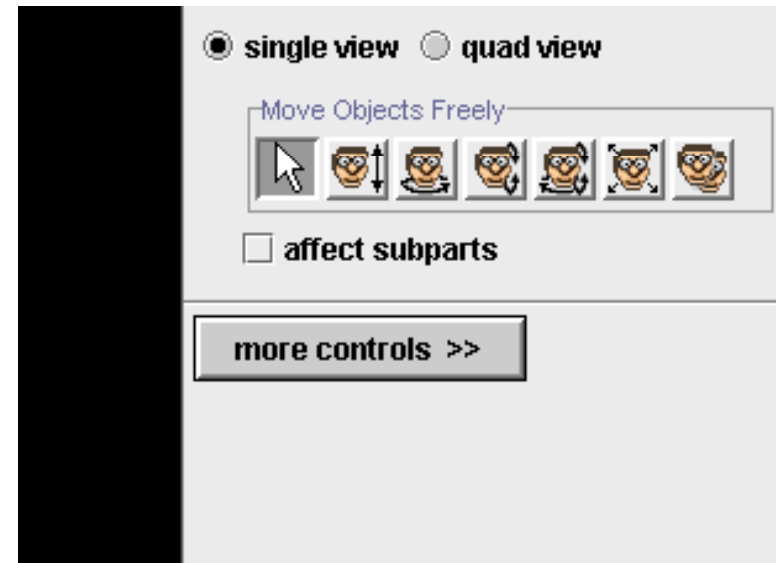
Dummy Cameras



- You can use the purple arrows on the bottom of your world to move around the camera
- You can drop a dummy camera wherever you find a view that needs a snapshot

Dummy Cameras

- Dummy cameras are used to hold a specific view of your world in place while you move the regular camera around
- Click the add objects button on your screen



- Look to the right for a button labeled “more controls”. Click it

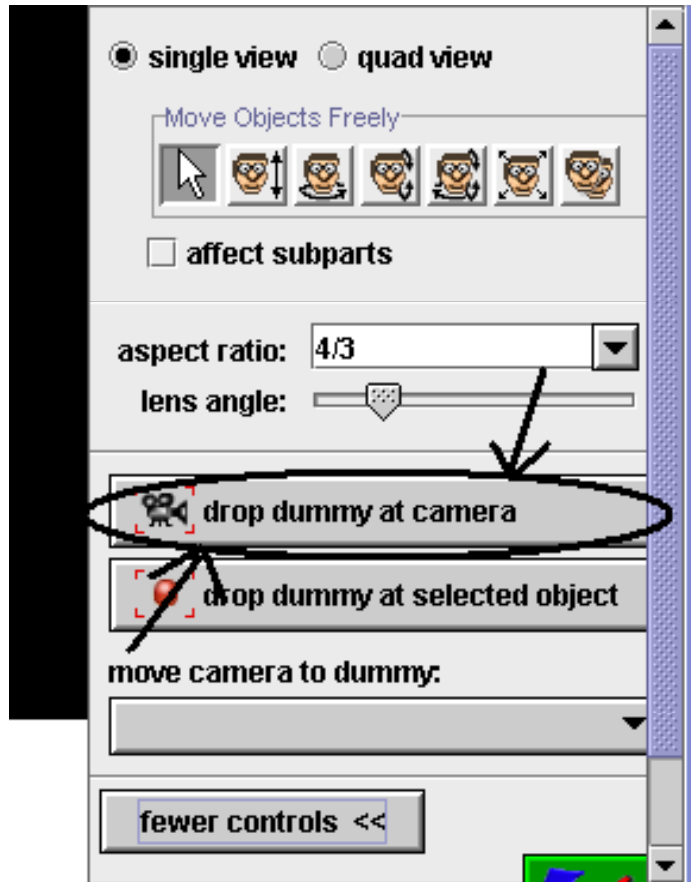
Dummy Camera

- We did this earlier in part one by saving the original camera position, but we will now add more camera positions. You should always save your original camera position before moving your camera.
- Use the purple arrows to move the screen to a new position on your camera that looks closely at the horse.



-We will show you how to drop a dummy camera at this location and name it **Horse Position**.

Dummy Cameras

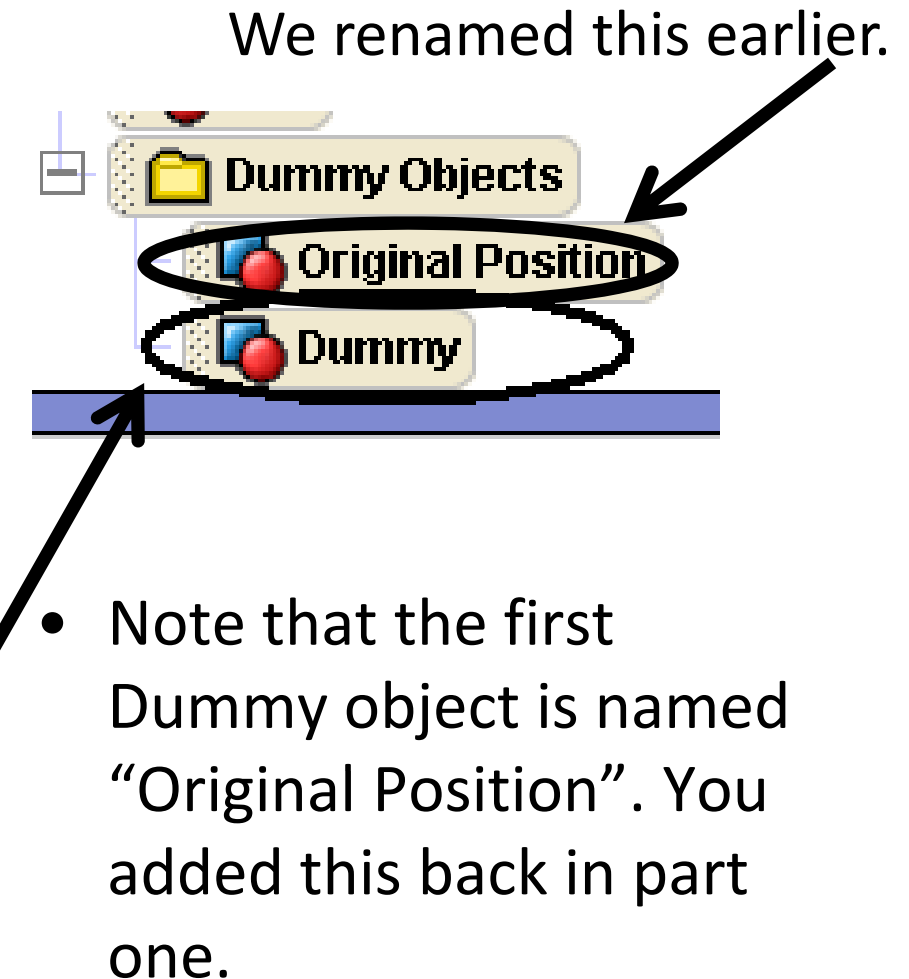


- Now click on “drop dummy at camera”. Just click it once!
- This will literally drop a virtual camera where your camera currently is.

Dummy Camera

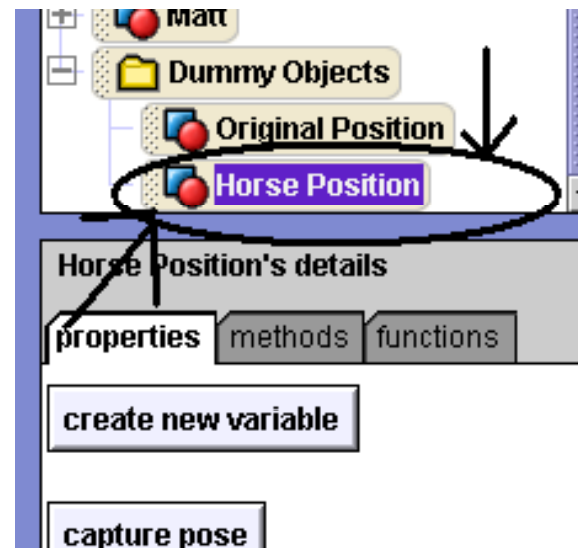
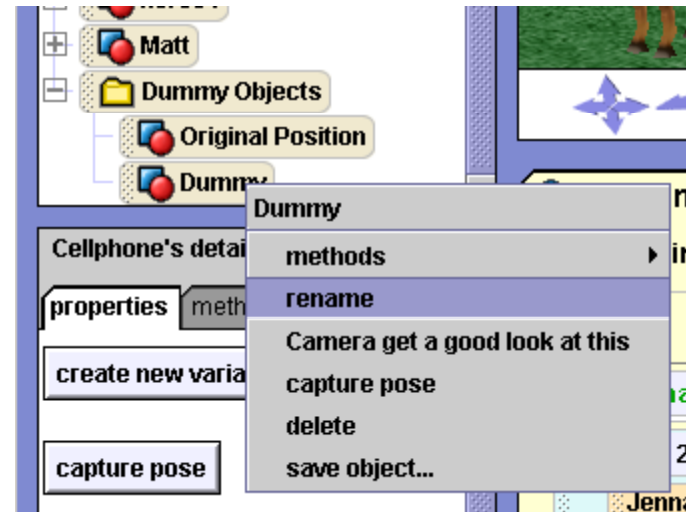
- Go over to your object tree
- There should be a folder called “Dummy Objects”.
- Underneath it will be a list of each dummy you have dropped, in the order that they are dropped

This is our new dummy camera position.



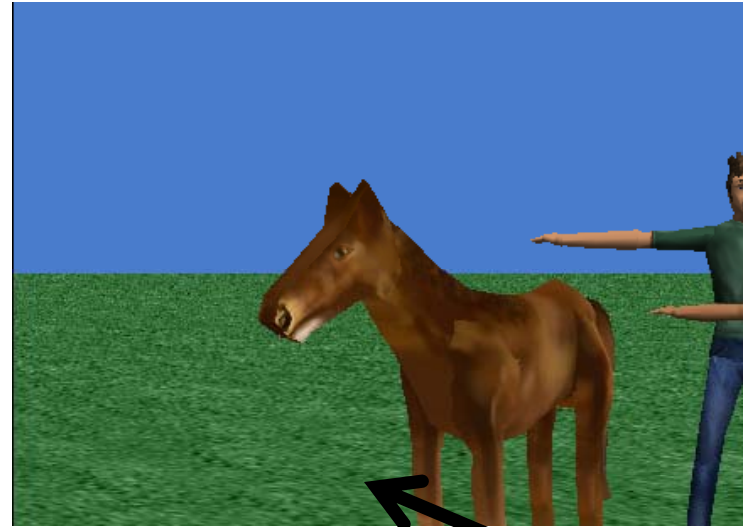
Dummy Camera

- Unfortunately all of your dummy cameras are labeled “Dummy”
- You can fix this by right clicking on “Dummy” and selecting “rename”.
- You can rename your Dummy whatever you would like.
- In this case it is named “Horse Position”.



Dummy Camera

- You can move the camera wherever you would like. Let's move it back to the original camera view.
- Now right click on "camera" in your object tree and select methods.
- Click "set point of view to" Dummy Objects/Original Position. See the next slide for a picture of the selection process.

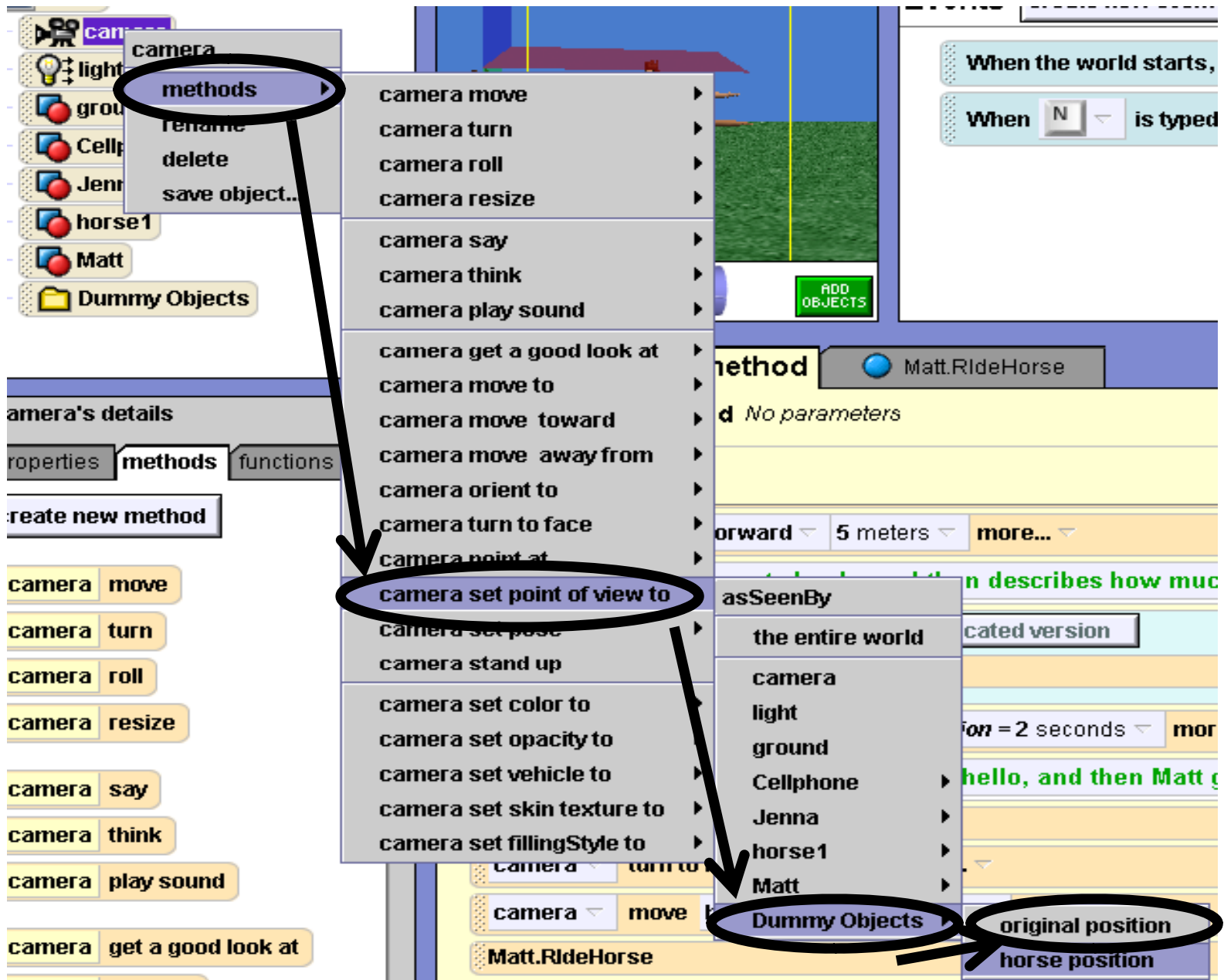


Original position

Horse position

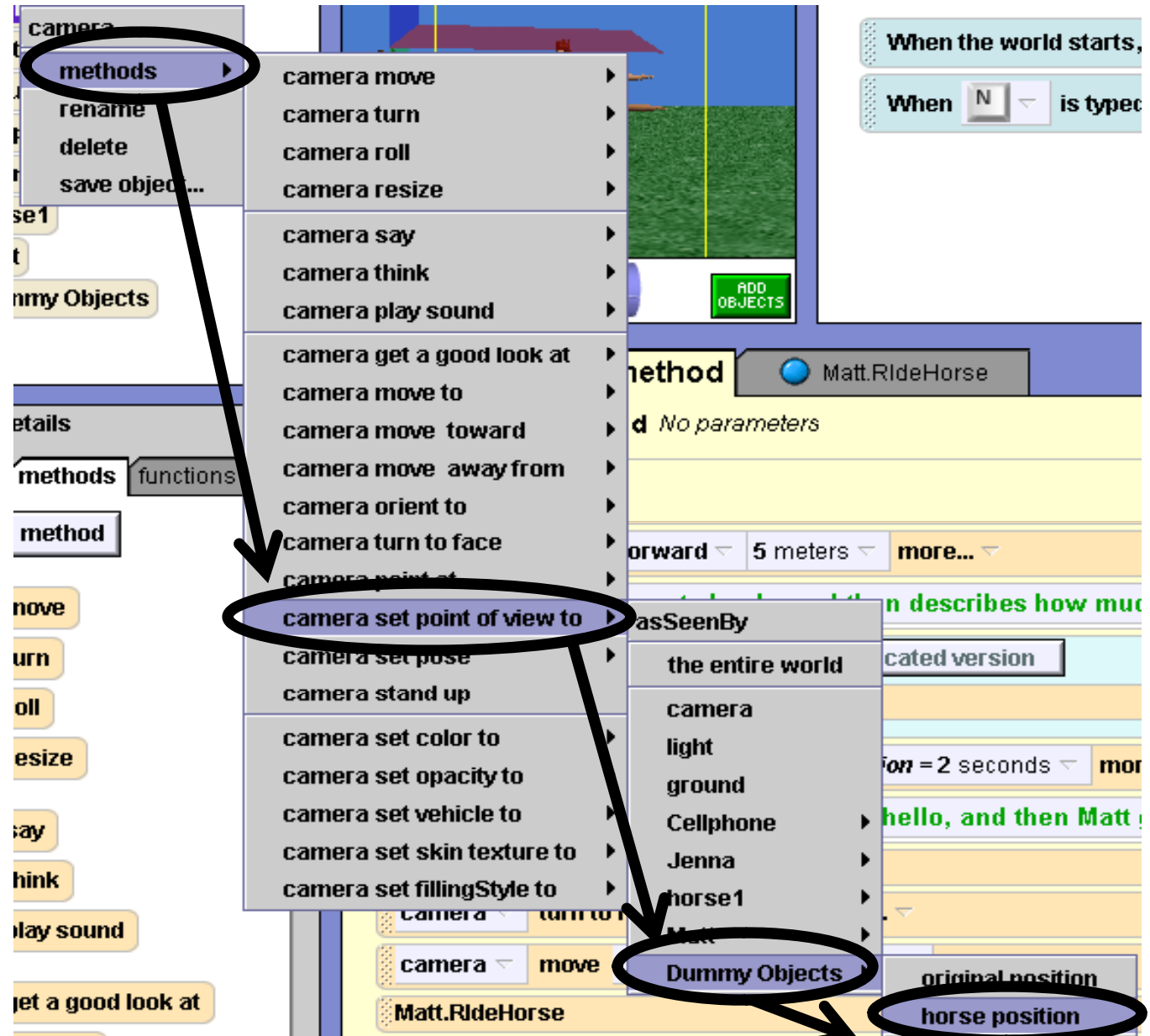


Resetting Your Camera View



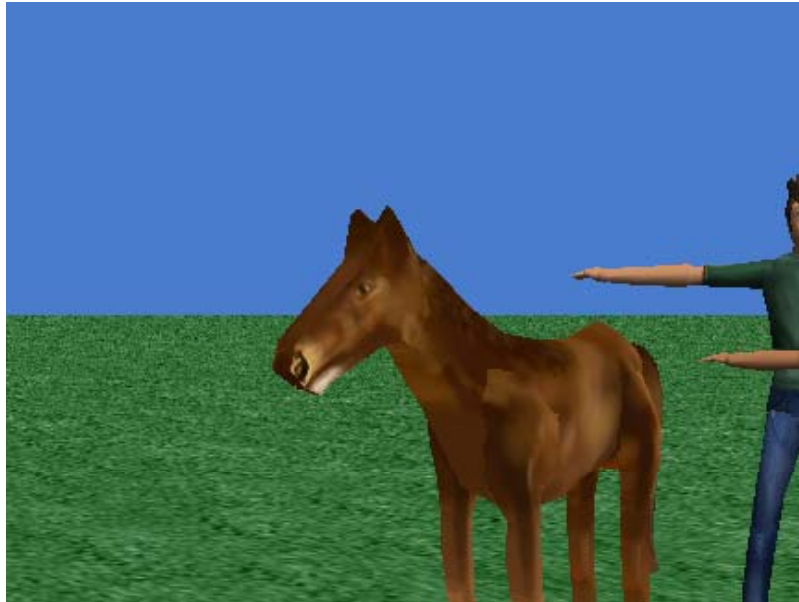
Resetting Your Camera View

-Now try using this same process to set your camera back to Horse View.



Dummy Camera

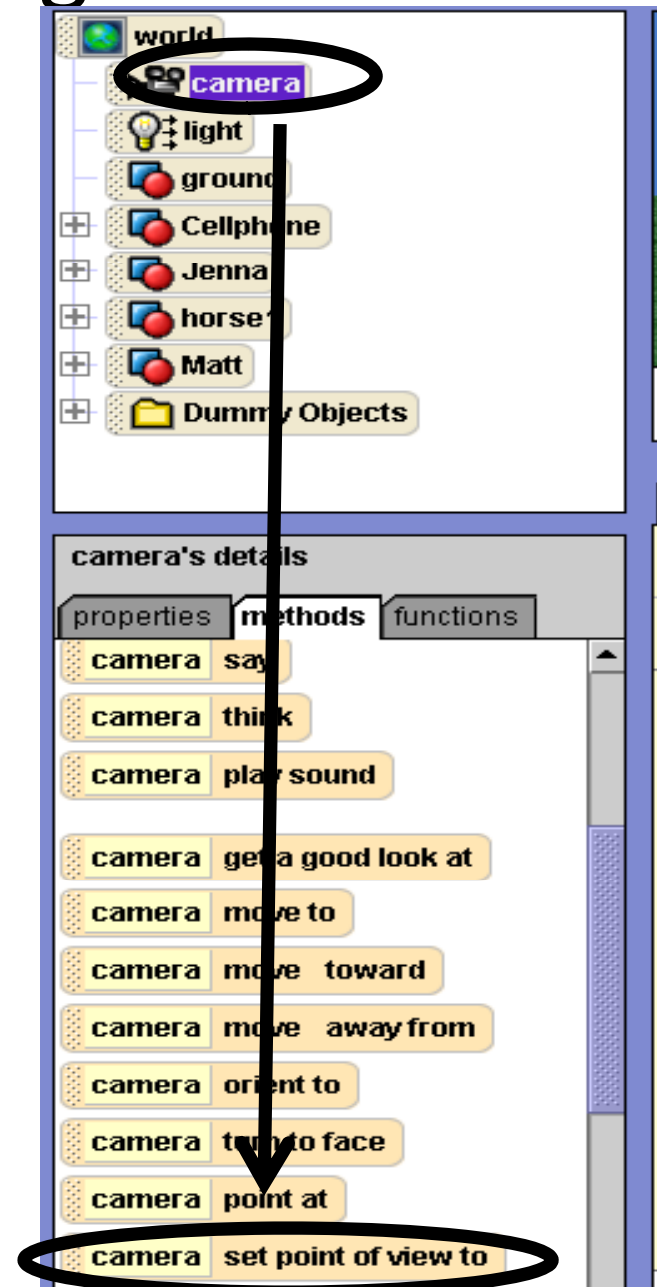
- Once you select “Horse Position” your screen should return to the position that it was at when you first dropped the Dummy Camera, for horse close up.



- You can use a Dummy Camera anywhere in the world that you would like.
- Changing the Camera View between Dummy Cameras, by right clicking and choosing “Methods” is useful for positioning things in your world, before it starts.

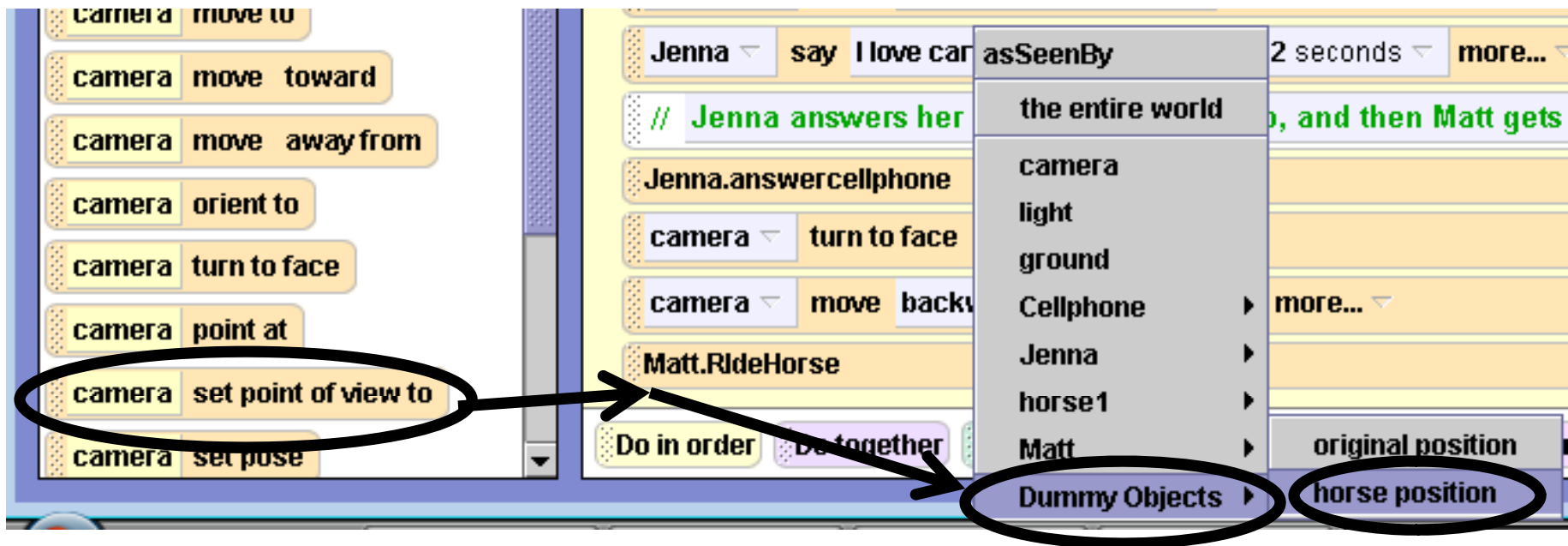
Dummy Cameras During Animation

- If you want the camera view to change during your animation you can drag it into your code, from camera methods.
- Click on camera in the object tree, and then find **set point of view to** in your methods tab.



Dummy Cameras During Animation

-Drag **set point of view to** to the very end of **my first method** right under **Matt.RideHorse** and drop it there. Set it to **Horse Position** so that the camera closes up on the horse at the end of your animation.



Play your world to test it out.

Moving On

-Now we will show you two new things:

-How to make objects all, or partly invisible.

-How to insert titles with text objects in your world.

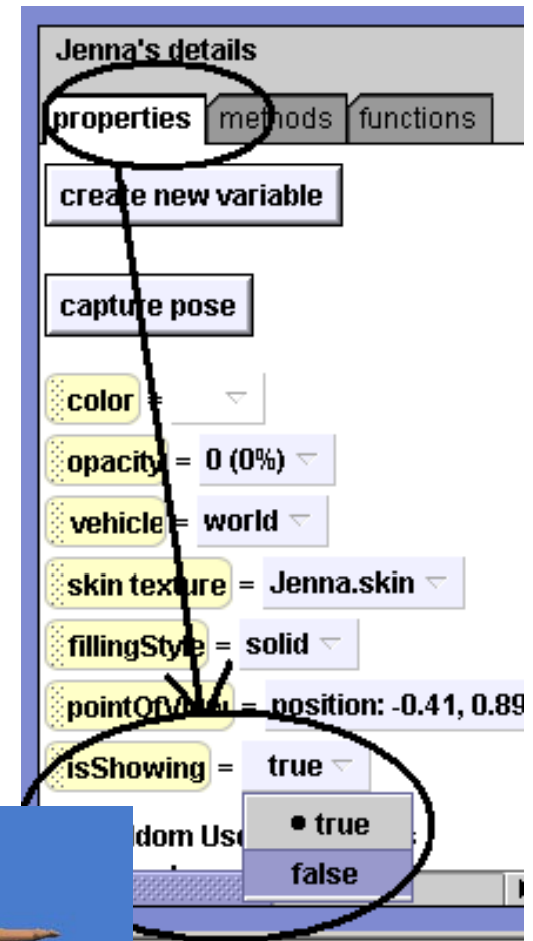
Making Objects Invisible:

IsShowing and Opacity

- Is showing and opacity both change your objects to make them more or less visible.
- Is showing has two settings. Your object is either visible, or its invisible.
- Opacity works by percentages. You can make something 10% visible, 20% visible, all the way up to 100% visible.

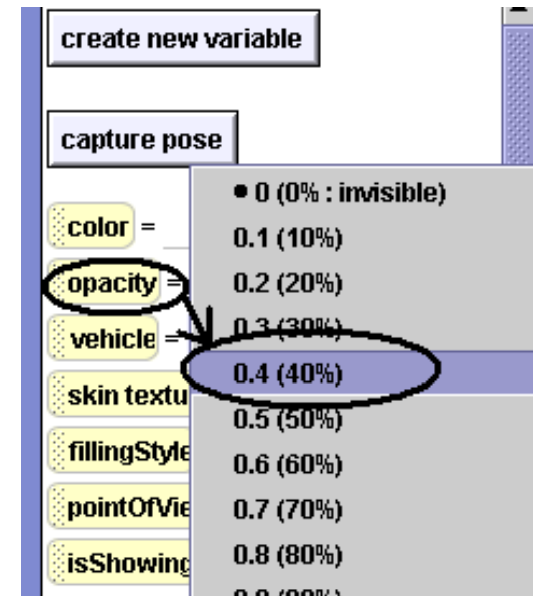
Invisibility :Is Showing

- Select the character that you would like to make invisible.
- Under the properties tab there should be a button called “Is showing”.
- If you select “false” your character should become invisible.
- Then make your character visible again by selecting “true”.



Making a Ghost:Opacity

- Opacity works in a very similar way to “Is showing”, except you can set an object to an in between stage.



- Try clicking on Opacity and selecting 40%
- Note that your character is now see through
- This works really well for ghost worlds!

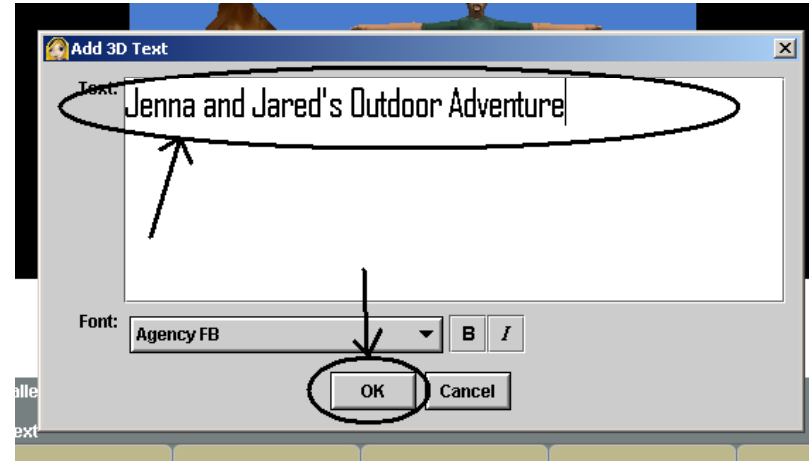
Adding Titles:3D Text

- Go into “Add Objects”
- Click on the “Create 3D text” Object



3D Text Continued

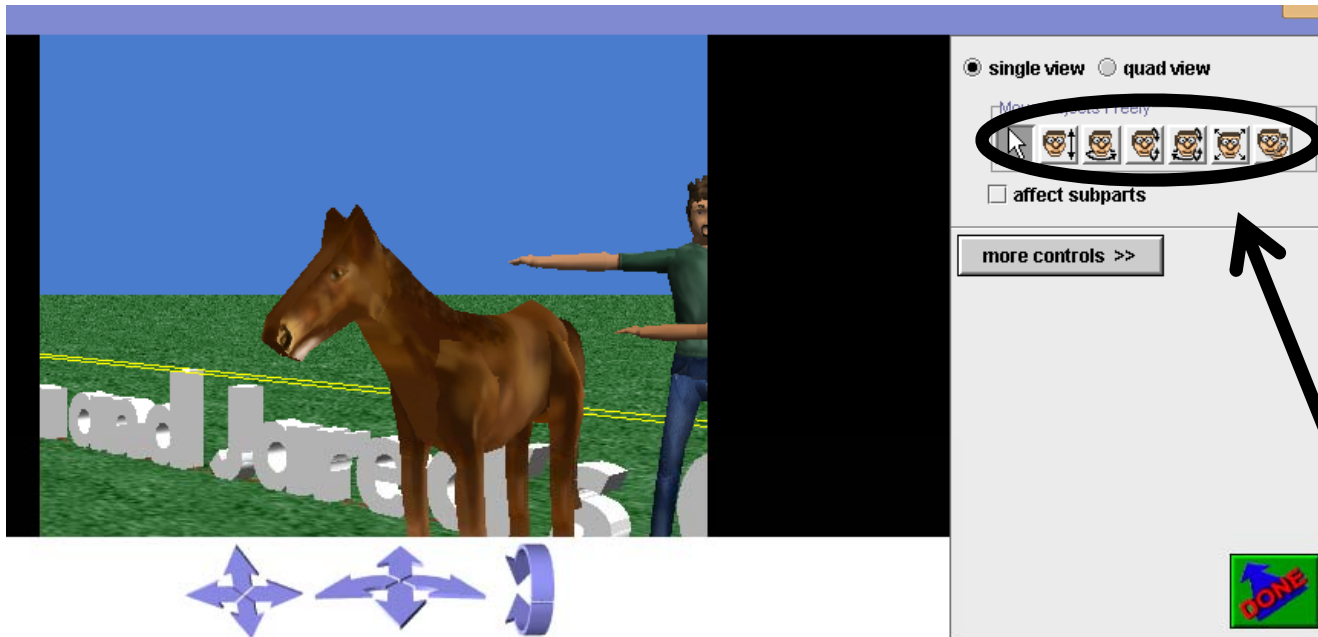
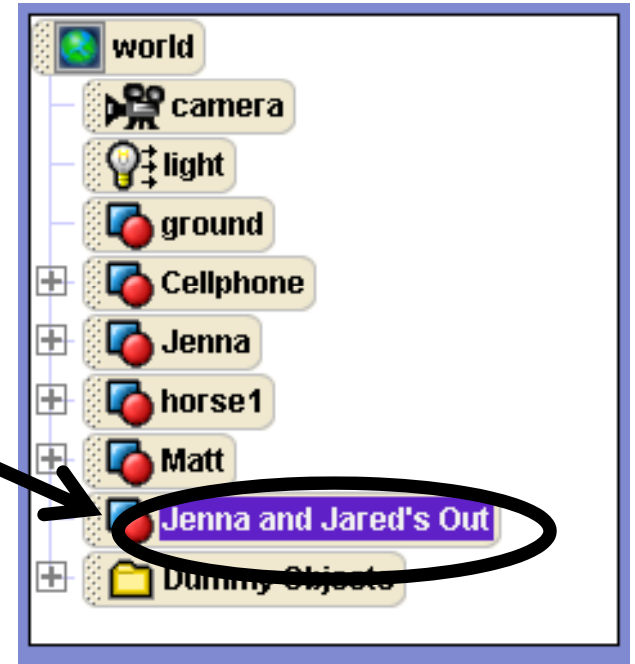
- Once you click on the 3D text object, a box should pop up to type text into.
- Type a message
- Select ok



- Your text should appear in your world like this

3D Text Continued

-Your text object will appear in your object tree just like any other object.



-You can also use the object moving buttons on it like any other object. Use them to position it in the sky.

3D Text



- This is how your text should look when you are done.
- You can set the “is showing” to false after a few seconds
- 3D text works really well for giving instructions at the beginning of a game or interactive story.

Finishing up



- Now you know the basics of creating a world
- In the next part, we will teach you some more details of Alice that can make your worlds really cool.

Problems

- Now its your turn, try completing these things in your world
 - Make an event so that one of your characters becomes invisible when you press **i**, and then another event that makes it visible again when you press **s**.
 - Make an event so that the Horse's opacity turns to 40% when you press **g**, for "ghost".
 - Drop a Dummy Camera behind your characters and swap between that and Horse Position.